

<b>Notice of Allowability</b>	Application No.	Applicant(s)
	09/047,717	TANIGUCHI ET AL.
	Examiner	Art Unit
	Callie E. Shosho	1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTO-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to amendment of 7/9/03, supp. amendment of 9/25/03, declaration of 9/26/03, interview of 10/3/03.
2.  The allowed claim(s) is/are 23-25 and 28-70.
3.  The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All
  - b)  Some\*
  - c)  None
  1.  Certified copies of the priority documents have been received.
  2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

5.  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - (a)  The translation of the foreign language provisional application has been received.
6.  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8.  CORRECTED DRAWINGS must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1)  hereto or 2)  to Paper No. \_\_\_\_\_.
  - (b)  including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.**

9.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

- 1  Notice of References Cited (PTO-892)
- 3  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 5  Information Disclosure Statements (PTO-1449), Paper No. \_\_\_\_\_.
- 7  Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 2  Notice of Informal Patent Application (PTO-152)
- 4  Interview Summary (PTO-413), Paper No. 10/3/03
- 6  Examiner's Amendment/Comment
- 8  Examiner's Statement of Reasons for Allowance
- 9  Other

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

(1) Claim 52, first line after formula (I), after "represent" and before "or", delete "a hydrogen atom".

(2) Claim 52, second line after formula (I), after "group", delete "provided that R<sup>1</sup> and R<sup>2</sup> do not simultaneously represent a hydrogen atom;"

(3) Cancel claim 71.

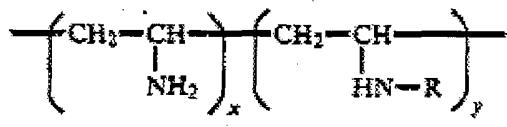
2. Authorization for this examiner's amendment was given in a telephone interview with Clifford Mass on 10/03/03.

### **Statement of Reasons for Allowance**

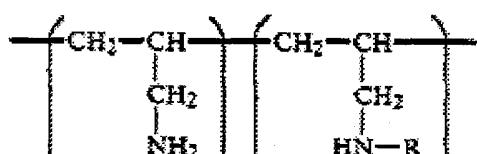
3. In light of the supplemental amendment filed 9/25/03 and the executed declaration filed 9/26/03, the present claims are allowable over the “closest” prior art Tomita et al. (U.S. 5,017,224) and Taniguchi et al. (U.S. 5,667,572) for the following reasons:

Tomita et al. disclose an ink composition comprising water, 0.5-5% cationic resin which has molecular weight greater than 300, urea, alkali-soluble dye, 10-30% solvent, nonionic water-soluble resin, base such as sodium hydroxide, surfactant, glycerin, triethanolamine, and diethylene glycol.

However, the cationic resins disclosed by Tomita et al. are of the formula:



and



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wherein x is 1-1,000 and y is 1-1,700 and thus, it can be seen that the cationic resins require use of primary amino unit, i.e. repeating unit A above, which is outside the scope of the present claim which requires cationic resin consisting of repeating units as set forth in presently claimed formula I. Further, in repeating unit B above, Tomita et al. disclose that R is H or methyl. Thus, the repeating unit of Tomita et al. corresponds to presently claimed formula I where R<sup>1</sup> is H and R<sup>2</sup> is H or methyl which is in direct contrast to all the present claims which require R<sup>1</sup> and R<sup>2</sup> which are each C<sub>1</sub>-C<sub>5</sub> alkyl.

Takizawa et al. disclose ink jet ink comprising water, copolymer which has molecular weight of 1,000-1,000,000 and is obtained from cationic monomer including allylamine and methylallylamine, pigment or acidic and direct dye, solvent, base such as potassium hydroxide, and surfactant. There is also disclosed an ink set comprising yellow, black, magenta, and cyan inks wherein one or several of the inks comprise copolymer as described above.

However, the resin of Takizawa et al. is a copolymer which contains cationic repeating units as well as anionic repeating units. This is in direct contrast to the present claims which require cationic resin consisting of repeating units as set forth in presently claimed formula I. Further, the cationic repeating units disclosed by Takizawa et al. are allylamine which corresponds to presently claimed formula I where R<sup>1</sup> and R<sup>2</sup> are each H or methylallylamine which corresponds to presently claimed formula I where R<sup>1</sup> is methyl and R<sup>2</sup> is H. This is in direct contrast to the present claims which all require R<sup>1</sup> and R<sup>2</sup> which are each C<sub>1</sub>-C<sub>5</sub> alkyl. There is no disclosure in Takizawa et al. of cationic resin comprising repeating units as set forth in presently claimed formula I.

Further, applicants have filed executed declaration on 9/26/03 which compares ink comprising cationic resin within the scope of the present claims, i.e. comprising repeating units where  $R^1$  and  $R^2$  are each  $C_1$ - $C_5$  alkyl (Tests I, III, IV, and VI), with ink comprising cationic resin outside the scope of the present claims but within the scope of Tomita et al. or Takizawa et al. where  $R^1$  is methyl and  $R^2$  is H (Test II) and  $R^1$  is ethyl and  $R^2$  is H (Test V). It is shown that the ink of the present invention is superior in terms of lightfastness. Applicants also compare ink comprising cationic resin within the scope of the present claims, i.e. comprising repeating units where  $R^1$  and  $R^2$  are each  $C_1$ - $C_5$  alkyl (Tests I, III, IV, and VI), with ink comprising cationic resin outside the scope of the present claims but within the scope of Tomita et al. or Takizawa et al. where both  $R^1$  and  $R^2$  are H (Test VIII). It is shown that the present inks are superior in terms of print quality. Thus, the declaration is successful in establishing unexpected or surprising results over the cited prior art.

Thus, it is clear that Tomita et al. or Takizawa et al., either or alone or in combination, do not disclose or suggest the present invention.

In light of the above, it is clear that the rejections of record are untenable and so the present claims are passed to issue.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee.

Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

*Callie Shosho*  
Callie E. Shosho  
Primary Examiner  
Art Unit 1714

CS  
10/03/03